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lines may align with long lines which may be detected within the test pattern. The system 2 would then compare the template, held in memory 3, to the test pattern that is scanned 1 or viewed by an image capturing means to determine whether the anchor lines exist within the test pattern.

While the invention is described with reference to a particular embodiment, this particular embodiment is intended to be illustrative, not limiting. Various modifications may be made without departing from the spirit and scope of the invention as defined in the amended claims. Modifications and alterations will occur to others upon reading and understanding this specification; therefore, it is intended that all such modifications and alterations are included insofar as they come within the scope of the appended claims or equivalents thereof.

What is claimed is:

1. A counterfeit currency detection method using line detection information for determining location and orientation of a predetermined image pattern for matching against a test pattern to be authenticated, comprising the steps of:

   training a detector off-line with at least one example currency note wherein at least one template is generated thereby;

   identifying at least 1 pair of anchor lines within said generated template wherein each pair of anchor lines contain at least 2 orthogonal lines, said identifying step using edge detection and algorithmic transforms;

   rotating and shifting said template so that said anchor lines align with lines detected within said test pattern; and

   comparing said template to said test pattern to determine whether said anchor lines exist within said test pattern.

2. The method of claim 1 wherein said anchor lines may comprise straight lines representing edges within said test pattern.

3. A counterfeit detection system comprising a microprocessor programmed to:

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facilitate the training of a detector off-line with authentic currency documents which are scanned into said system wherein a plurality of templates are generated by recording an image pattern within said authentic currency documents resulting in at least one template wherein said at least one template is stored in a memory;

identify at least 1 pair of anchor lines within said at least one template wherein each pair of anchor lines contain at least 2 orthogonal lines, said identifying step using edge detection and algorithmic transforms;

rotate and shift said at least one template during counterfeit detection operations wherein matching of said at least one template to a scanned test pattern is facilitated so that said anchor lines align with similar lines which may be detected within said test pattern, thereby resulting in alignment; and

comparing said at least one template to said test pattern to determine whether said anchor lines exist within said test pattern.

4. The invention of claim 3 further comprising a memory for storing said templates.

5. The invention of claim 3 further comprising a scanner for scanning images into said system.

6. The invention of claim 3 further comprising a indicator means for indicating whether said test pattern is counterfeit based on said comparing.

7. The invention of claim 6 wherein said indicator means provides input to a controller that prevents photocopying or storage of said test pattern.

8. The invention of claim 4 further comprising a scanner for scanning images into said system.

9. The invention of claim 8 further comprising a indicator means for indicating whether said test pattern is counterfeit based on said comparing.

10. The invention of claim 9 wherein said indicator means provides input to a controller that prevents photocopying or storage of said test pattern.

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